

Spur

Work Order ID 52328 -1

Tuesday, September 22, 2009 3:12:10 PM



Page 1

Item ID: D2573

Accept



Setup Start



Revision ID: E

Stop



Item Name: Saddle, Aft Out 205

1.0

Start Date: 9/23/2009 Start Qty: 8.00



Required Date: 10/9/2009 Req'd Qty: 8.00



Reference:

Approvals: Process Plan:

PL

Date: 099-24

Tooling:

Cust Item ID:

Customer:

R

Date:

SPC (Y/N):

PL

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2573

Rev E

100



HAAS CNC VERTICAL MACHINING #1

0.00

PL/PL 09/10/09

8

HAAS 1

HAAS CNC vertical machine #1

Memo

Program Batch No. 52328 Double check by: *H.A.* 1-Machine Step
No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine
Step No 2 per Folio FA051 and inspect per attached Dimension Sheets 3-
Machine Step No 3 per Folio FA051 and insp

110



CONVENTIONAL MILLING MACHINE

0.00

PL/PL 09/10/09

8

Mill Conv

Conventional Milling Machine

Memo

Machine keyway as per dwg D2573 & D2574

120



QC2- Inspect parts off machine FAI/FAIB

0.00

PL/PL 09/10/09

QC

Quality Control

Memo

0.00

*P15
PL/PL 09/10/09*

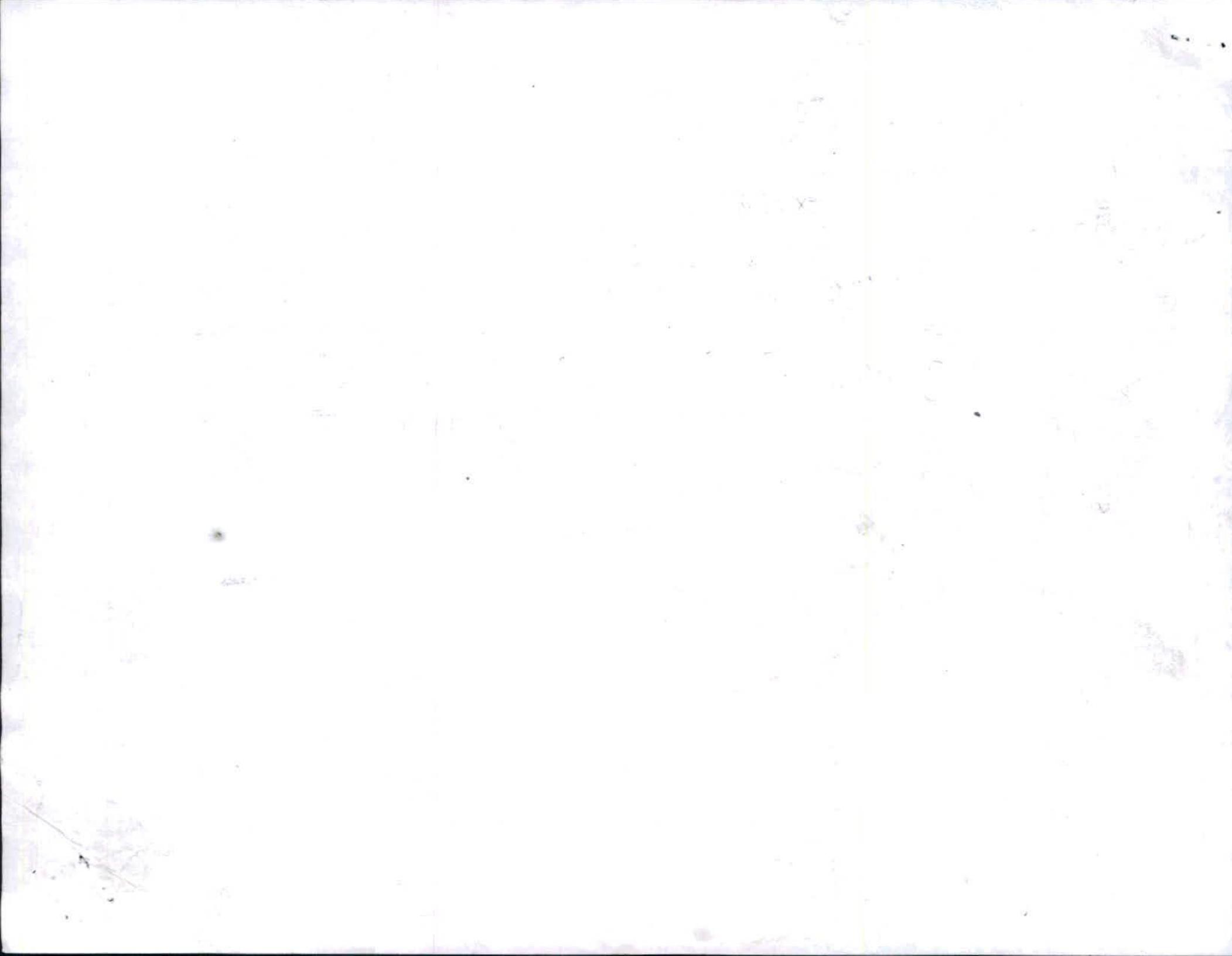


W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2573 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:52328		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
5/10/13	100	Found by opposite opposite shift that there are Dims on PAZ sheet that are not correct. - Also saddle to saddle take	CP 05.10.13 P 051042	0.113" THICK WALL OK → MIN THICK 0.110" SCRAP SEE BELOW BORE OF 1.530 OK BORE OF 2.021 OK	88 09/10/13	S 09/10/13	CP 05.10.13 P 051042	S 09/10/13
		bore is too thin about 0.100 should be 0.125 R.C. operatn error + he is problem.	✓ 051042	SCRAP QTY(2) WITH WALL < 0.110", HIGH STRESS AREA replace Batch# B46412 X2	88 09/10/13	S 09/10/13	✓ 051042	S 09/10/13
05.10.29	100	Re-measuring SADDLE WITH 0.113", ACTUAL MIN IS 0.110".	CP 05.10.29 P 051042	SCRAP SADDLE			CP 05.10.29 P 051042	

NOTE: Date & initial all entries

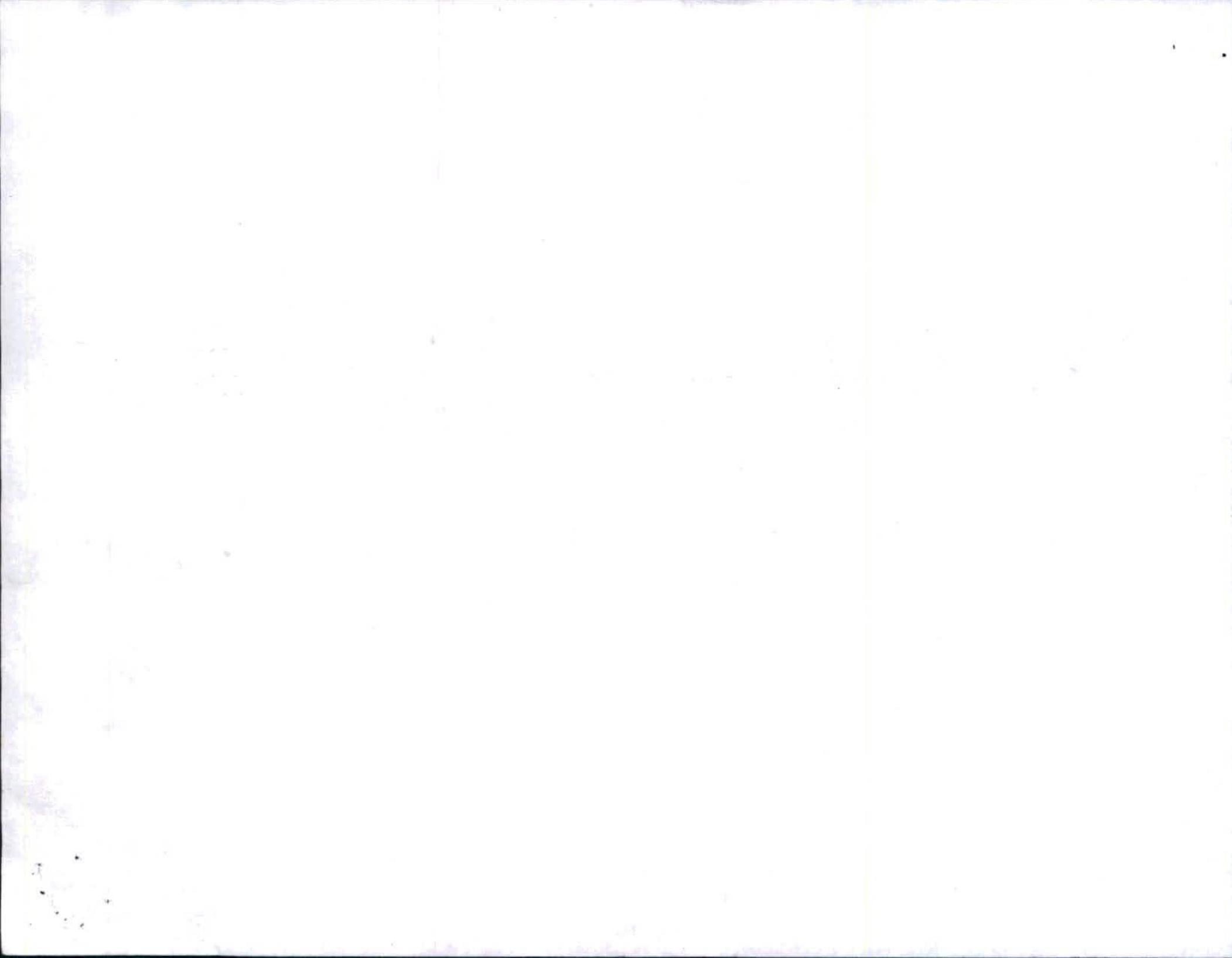


W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2573 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: 52328		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09/10/09	100	One saddle was affected by mark on the Island end on the Bale's. R.C. Machine malfunction Machine drop tool during changer operation.	/initial	Scrap Replace Batch # 46412	SP 09/10/09	SJ 09/10/09	/initial	SJ 09/10/09

NOTE: Date & initial all entries



Work Order ID 52328

Tuesday, September 22, 2009 3:12:10 PM



Page 2

Item ID: D2573

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Setup Start



Revision ID: E

Stop



Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 10/9/2009 Req'd Qty: 8.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



QC8- Inspect parts - second check

0.00

PART SCRAPED

QC

Quality Control

Memo

0.00

(see NCR)

GR 09.10.29

140



Chemical Conversion Coat per QSI005 4.1

0.00

HandFinish

Hand Finishing

Memo

0.00

150



White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Powdercoat

Powder Coating

Memo

0.00

START TIME: OVEN TEMPERATURE:
 FINISH TIME:



Work Order ID 52328

Tuesday, September 22, 2009 3:12:10 PM



Page 3

Item ID: D2573

Accept



Setup Start



Revision ID: E

Stop



Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 10/9/2009 Req'd Qty: 8.00



Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop


**Sequence ID/
Work Center ID**
**Operation
Description**
**Set Up/
Run Hours**
**Draw
Number**
**Draw
Rev.**
**Plan
Code**
**Accept
Qty**
**Reject
Qty**
**Reject
Number**
**Insp.
Stamp**

160



QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

170



Identify as per dwg & Stock Location: _____

0.00

Packaging

Memo

0.00

Packaging

180



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

in 91.1030



Picklist Print

Page 1

Tuesday, September 22, 2009 3:12:09 PM

Work Order ID: 52328



Parent Item: D2573RevE



Parent Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009

Required Date: 10/9/2009

Comments:

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6101-007RevB		Manufactured		No		100	Each	0.0000	8.0000			

Saddle Billet

Batch #: B46412 8 on L 09/10/07

Batch #: B46412 1 SF 09/10/07 (Scrap)



DART AEROSPACE LTD	Work Order:	32328
Description: Saddle, Aft Outboard	Part Number:	D2573
Inspection Dwg: D2573 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		.440	.440	.440			
B	1.745	1.755		1.748	1.750	1.750			
C	3.495	3.505		3.500	3.500	3.500			
D	1.745	1.755		1.750	1.750	1.750			
E	7.990	8.010		8.000	8.000	8.000			
F	0.490	0.510		.504	.504	.500			
G	0.257	0.262		.259	.259	.259	.258		
H	0.375	0.380		.378	.377	.377	.377		
I	0.490	0.510		.493	.496	.500			
J	1.174	1.184		1.178	1.178	1.178	1.177		
K	0.558	0.578		.559	.556	.558			
L	1.174	1.184		1.178	1.178	1.177	1.177		
M	1.365	1.375		1.367	1.367	1.367	1.362		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.123	4.123	4.123	4.123		
P	0.115	0.135		.125	.124	.122	.124		
Q	0.115	0.135		.135	.135	.135			
R	0.240	0.260		.251	.252	.251	.252		
S	0.115	0.135		.128	.130	.121			
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.228	3.228	3.224	3.231		
V	0.230	0.250		.238	.240	.238			
W	0.115	0.135		.130	.134	.135			
X	0.308	0.313		.310	.310	.311			
Y	0.760	0.765		.760	.760	.760			
Z	0.352	0.372		.364	.364	.364			
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.632	.632	.630			
AC	0.053	0.073		.063	.063	.063			
AD	0.240	0.260		.250	.250	.250	.250		
AE	1.500	1.520		1.572	1.511	1.512			
AF	0.115	0.135		.125	.130	.135			
AG	0.240	0.280		.271	.271	.277	.275		
AH	0.240	0.260		.247	.250	.249			
AI	2.000	2.020		2.002	2.002	2.002			
AJ	0.023	0.043		.033	.033	.077			

Accept/Reject

Measured by:	RF	Audited by:	
Date:	09/00/09	Date:	

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	RF



DART AEROSPACE LTD

Work Order:

32326

Description: Saddle, Aft Outboard

Part Number:

D2573

Inspection Dwg: D2573 Rev. E

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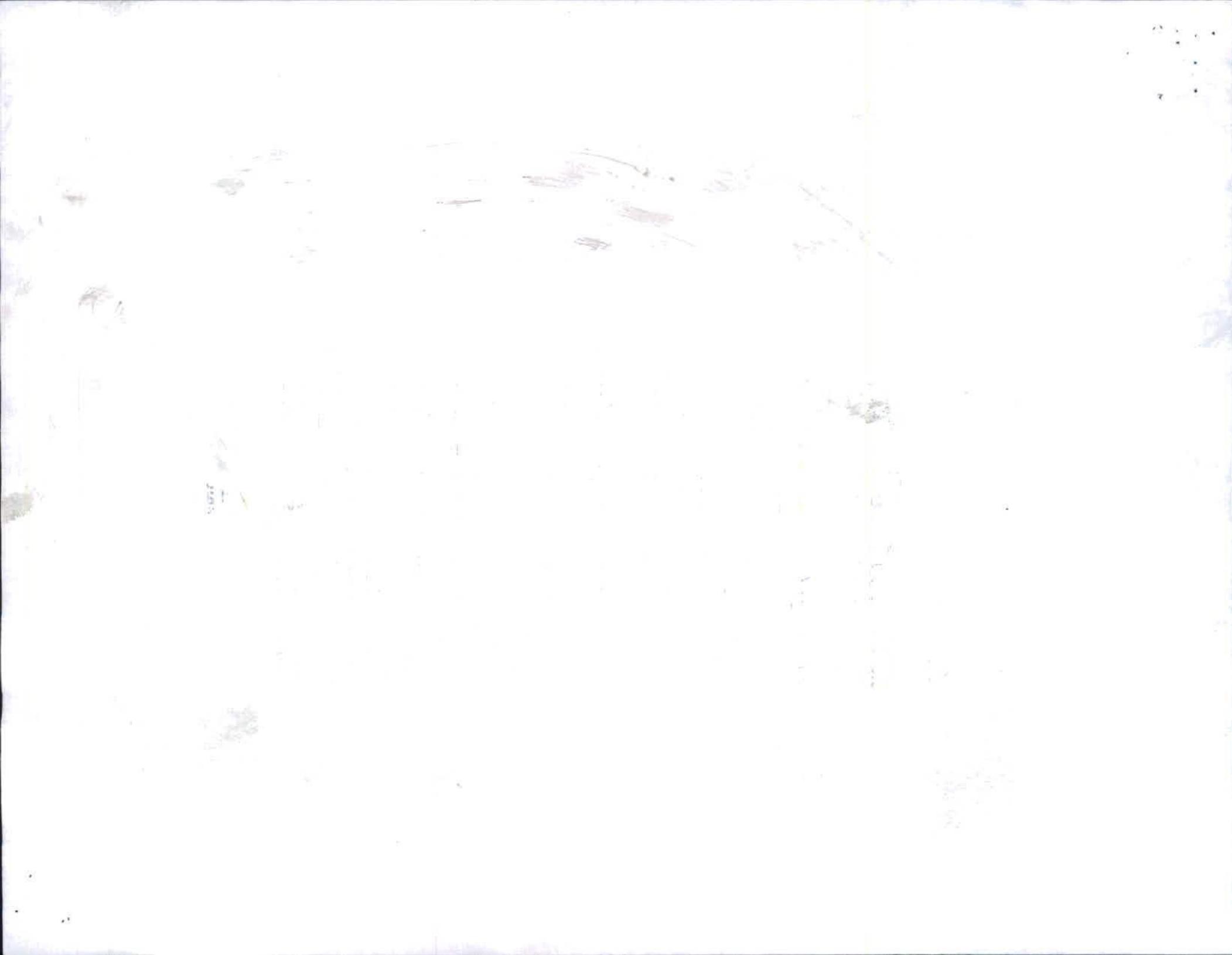
Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions			By	Date
				Serial Gauge	7/3 Gauge	Scrap Gauge		
A	0.438	0.443		.400	.439	.440		
B	1.745	1.755		1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750		
E	7.990	8.010		8.000	8.001	8.001		
F	0.490	0.510		.505	.506	.508		
G	0.257	0.262		.258	.258	.258		
H	0.375	0.380		.377	.377	.377		
I	0.490	0.510		.502	.494	.495		
J	1.174	1.184		1.177	1.177	1.177		
K	0.558	0.578		.568	1.555	.560		
L	1.174	1.184		1.177	1.177	1.177		
M	1.365	1.375		1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124		
P	0.115	0.135		.126	.126	.127		
Q	0.115	0.135		.135	.135	.135		
R	0.240	0.260		.252	.252	.253		
S	0.115	0.135		.117	.120	.125		
T	0.178	0.198		.188	.188	.188		
U	3.210	3.250		3.230	3.270	3.230	3.270	
V	0.230	0.250		.238	.234	.243	2.44	
W	0.115	0.135		.1K	.109	.125	.134	
X	0.308	0.313		.308	.310			
Y	0.760	0.765		.760	.760			
Z	0.352	0.372		.362	.372	.363	.368	
AA	0.470	0.530		.500	.500	.500	.500	
AB	0.615	0.635		.630	.635	.635	.635	
AC	0.053	0.073		.063	.063	.063	.063	
AD	0.240	0.260		.250	.250	.250	.250	
AE	1.500	1.520		1.517	1.530	1.500	1.508	
AF	0.115	0.135		.125	.125	.125	.118	
AG	0.240	0.280		.270	.270	.270	.270	
AH	0.240	0.260		.250	.243	.253	.253	
AI	2.000	2.020		2.002	2.022	2.000	2.010	
AJ	0.023	0.043		.077	.033		2.024	

Accept/Reject

Measured by:	SP	Audited by:	
Date:	09/10/09	Date:	

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	SP



DART AEROSPACE LTD

Work Order: 52308

Description: Saddle, Aft Outboard

Part Number: D2573

Inspection Dwg: D2573 Rev. E

Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	.97	.10	.11	.4	By	Date
A	0.438	0.443		.446	.439	.439			
B	1.745	1.755		1.748	1.749	1.749			
C	3.495	3.505		3.499	3.499	3.499			
D	1.745	1.755		1.749	1.749	1.749			
E	7.990	8.010		8.004	8.003	8.003			
F	0.490	0.510		.502	.503	.505			
G	0.257	0.262		.258	.259	.259			
H	0.375	0.380		.377	.377	.377			
I	0.490	0.510		.502	.500	.500			
J	1.174	1.184		1.177	1.178	1.178			
K	0.558	0.578		.569	.569	.569			
L	1.174	1.184		1.177	1.178	1.178			
M	1.365	1.375		1.370	1.369	1.368			
N	2.495	2.505		2.500	2.500	2.499			
O	4.119	4.129		4.129	4.123	4.123			
P	0.115	0.135		.122	.125	.123			
Q	0.115	0.135		.135	.135	.135			
R	0.240	0.260		.252	.251	.251			
S	0.115	0.135		.128	.127	.124			
T	0.178	0.198		.188	.188	.188			
U	3.210	3.250		3.230	3.236	3.230			
V	0.230	0.250		.242	.240	.240			
W	0.115	0.135		.132	.129	.130			
X	0.308	0.313			.312	.312			
Y	0.760	0.765			.760	.760			
Z	0.352	0.372		.368	.368	.367			
AA	0.470	0.530		.500	.500	.500			
AB	0.615	0.635		.635	.635	.633			
AC	0.053	0.073		.063	.063	.063			
AD	0.240	0.260		.250	.248	.249			
AE	1.500	1.520		1.509	1.571	1.571			
AF	0.115	0.135		.122	.126	.126			
AG	0.240	0.280		.270	.273	.278			
AH	0.240	0.260		.251	.249	.251			
AI	2.000	2.020		2.000	2.002	2.000			
AJ	0.023	0.043			.033	.033			
Accept/Reject									

Measured by: *RF* / *cmf*
Date: *09/10/09* / *09/10/11e*Audited by:
Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM <i>RF</i>	<i>JLM</i>

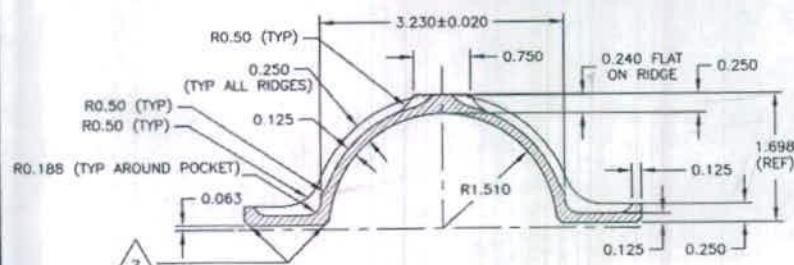
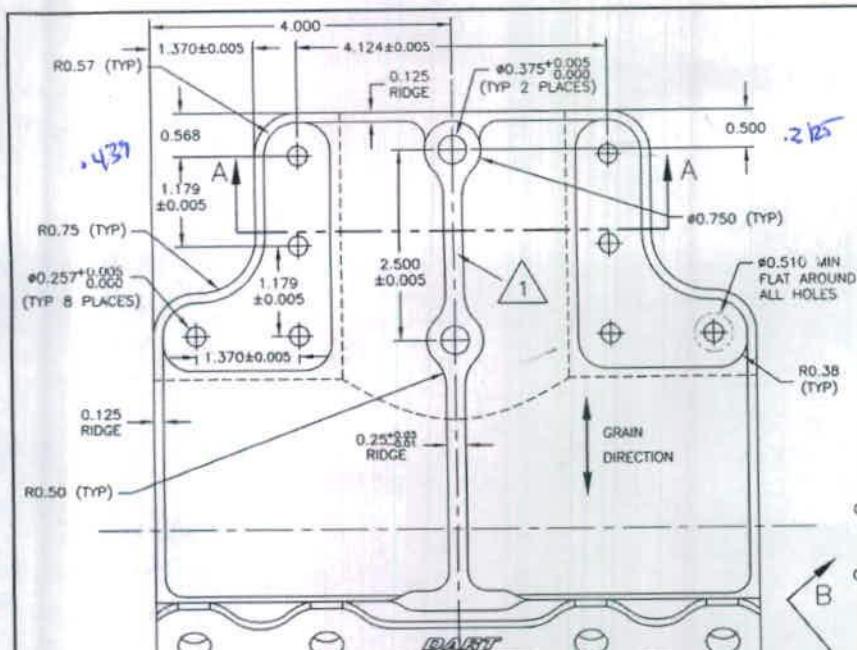


SHOP COPY
RETURN TO
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT

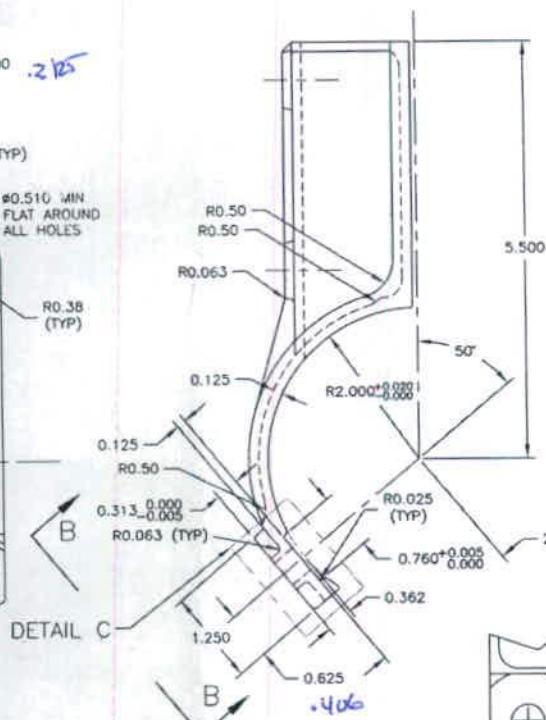
WITHOUT NOTICE
WORK ORDER
NO. 52326

RELEASED

05-12-06



SECTION A-A



DETAIL C
SCALE 4:3

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DART AEROSPACE LTD.

NOTES

MATERIAL: 7075-T7351 (QQ-A-250/12)
(REF DART SPEC. D6102-001)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

1 ENGRAVE PART AND BATCH NUMBER IN THIS
AREA TO MAX DEPTH OF 0.010

2 ENGRAVE DART LOGO TO MAX DEPTH OF 0.015
WITH MIN RAD 0.125

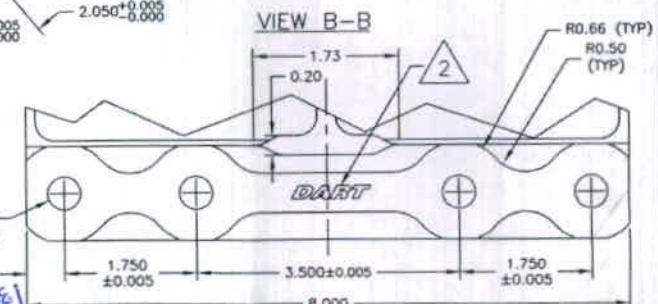
3 CHAMFER 0.063" x 45° AROUND THIS SURFACE
(TYPICAL 2 PLACES)

4 CHAMFER 0.063" x 45° ALL AROUND

5 CHAMFER 0.033" x 45° (SEE DETAIL C)

E

VIEW B-B



E	05.07.13	ADD CHAMFER ON RIDGE NOTE 5
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCORP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSP A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE

DESIGN DS	DRAWN BY PH	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED <input checked="" type="checkbox"/>	APPROVED <input checked="" type="checkbox"/>	DRAWING NO. D2573 REV. E SHEET 1 OF 1
DATE 05.07.13	TITLE OUTER AFT SADDLE	SCALE 2:3

